



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,448	12/19/2005	Michael John O'Brien	10256.124	6751
22913	7590	01/22/2009	EXAMINER	
Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, UT 84111			BASKIN, JEREMY S	
			ART UNIT	PAPER NUMBER
			4137	
			MAIL DATE	DELIVERY MODE
			01/22/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/507,448

**Applicant(s)**

O'BRIEN, MICHAEL JOHN

**Examiner**

Jeremy S. Baskin

**Art Unit**

4137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Objections***

1. **Claims 7** is objected to because of the following informalities: Claim 7 recites the limitation "the magnetic field" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim has been examined on the merits with the term understood to be "the magnetic attraction."

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 19** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "the member" in the second and third lines of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim has not been examined on the merits.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-3, 6, 7, 9-11, 13-16, and 20** are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 2,661,024 to Knox (Knox).

Knox teaches:

In Reference to Claim 1

(Currently Amended) A magnetic valve (11) comprising a collar (33) surrounding and defining a port (37) and a plug (18) movable from a first position within the port (Figure 5), in which the port is wholly closed by the plug, to a second position out of the port (Figure 2), in which the port is not wholly closed, and in which the plug and collar are magnetically attracted (col. 3, lines 59-65) such that in the first position the plug is magnetically retained within the port (Figure 5), and wherein a first side of the plug has a convex shape (19).

In Reference to Claim 2

(Original) A magnetic valve according to claim 1 (see the rejection of Claim 1 above) which the first side of the plug (19) has no flat surfaces perpendicular to the direction of material flow through the port (Figure 5).

In Reference to Claim 3

(Currently Amended) A magnetic valve according to claim 1 (see the rejection of Claim 1 above) in which the first side of the plug is conical (19).

In Reference to Claim 6

(Currently Amended) A valve as claimed in claim 1 (see the rejection of Claim 1 above), in which a magnetic field is generated by the collar (33).

In Reference to Claim 7

(Currently Amended) A valve as claimed in claim 1 (see the rejection of Claim 1 above), in which a permanent magnet (33) is the source of the magnetic field.

In Reference to Claim 9

(Currently Amended) A valve as claimed in claim 1 (see the rejection of Claim 1 above), and including a limiter (17) depending away from the collar which can engage the plug) to limit the travel of the plug away from the collar in a first direction (col. 3, lines 15-19).

In Reference to Claim 10

(Currently Amended) A valve as claimed in claim 1 (see the rejection of Claim 1 above), and including a stop (26) which prevents the plug being moved from the first position in a second direction (col. 4, lines 11-17).

In Reference to Claim 11

(Currently Amended) A valve mechanism (11) comprising a valve (18) and an actuator (28, 27) to operate the valve, the valve being a magnetic valve (Figure 5) including a collar (33) surrounding and defining a port (37) and a plug (19) movable from a first position within the port (Figure 5), in which the port is wholly closed by the plug, to a second position out of the port (Figure 2), in which the port is not wholly closed, and in which the plug and collar are magnetically attracted (col. 3, lines 59-65) such that in the first position the plug is magnetically retained within the port (Figure 5), and wherein a first side of the plug has a convex shape (19), the actuator including a member (27) which, when the member is driven in a first direction, engages a side of the plug (40) to move the plug from the first to the second position thereby opening the valve (Figure 2).

In Reference to Claim 13

(Currently Amended) A valve mechanism as claimed in claim 11 (see the rejection of Claim 11 above), in which a second side of the member (27) opposite to the side which engages the plug has a convex shape (col. 4, lines 11-17).

In Reference to Claim 14

(Original) A valve mechanism as claimed in claim 13 (see the rejection of Claim 13 above) in which the second side has no flat surfaces perpendicular to the direction of flow of material through the port (27 in Figure 5).

In Reference to Claim 15

(Currently Amended) A valve mechanism as claimed in claim 13 (see the rejection of Claim 13 above) in which the second side (27) is conical (27 in Figure 5).

In Reference to Claim 16

(Currently Amended) A valve mechanism as claimed in claim 13 (see the rejection of Claim 13 above), in which the second side of the actuator (27) and the first side of the plug (19) define a smooth outer surface (Figure 5, col. 3, lines 37-43).

In Reference to Claim 20

(Currently Amended) A method of operating a magnetic valve having a collar (33) defining a port (37) and a plug (19) magnetically retained in the port (col. 3, lines 59-65), the method including comprising the steps of engaging an actuator member (28, 27) with a first side of the plug (40) and driving the plug in a first direction out of the port (Figure 2), wherein a first side of the plug has a convex shape (19) so as to help prevent material accumulating on the first side of the plug.

6. **Claims 1-3, 5, 17, and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 2,628,005 to Keeshan (Keeshan).

Keeshan teaches:

In Reference to Claim 1

(Currently Amended) A magnetic valve (Figure 1) comprising a collar (2) surrounding and defining a port (32) and a plug (36) movable from a first position within the port (Figure 4), in which the port is wholly closed by the plug, to a second position out of the port (Figure 3), in which the port is not wholly closed, and in which the plug and collar are magnetically attracted (col. 3, lines 59-65) such that in the first position the plug is magnetically retained within the port (Figure 4), and wherein a first side of the plug has a convex shape (38).

In Reference to Claim 2

(Original) A magnetic valve according to claim 1 (see the rejection of Claim 1 above) which the first side of the plug (36) has no flat surfaces perpendicular to the direction of material flow through the port (Figure 3).

In Reference to Claim 3

(Currently Amended) A magnetic valve according to claim 1 (see the rejection of Claim 2 above) in which the first side of the plug (36) is conical (col. 2, lines 41-51).

In Reference to Claim 5

(Currently Amended) A valve as claimed in claim 1 (see the rejection of Claim 1 above), in which a magnetic field is generated by the plug (col. 2, lines 41-51).

In Reference to Claim 17

(Original) A container (54) having a valve (Figure 3), the valve being a magnetic valve including a collar (2) surrounding and defining a port (32) and a plug (36) movable from a first position within the port (Figure 4), in which the port is wholly closed by the plug, to a second position out of the port (Figure 3), in which the port is not wholly closed, and in which the plug and collar are magnetically attracted (col. 3, lines 59-65) such that in the first position the plug is magnetically retained within the port (Figure 4), and wherein a first side of the plug has a convex shape (38).

In Reference to Claim 18

(Currently Amended) A container according to claim 17 (see the rejection of Claim 17 above) in which the first side of the plug (36) has no flat surfaces perpendicular to the direction of material flow through the port (at 32).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 4, 12, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox in view of US Patent No. 5,676,344 to Graffin (Graffin).

In Reference to Claim 4

Knox teaches (Original) a magnetic valve according to claim 3 (see the rejection of Claim 3 above), but fails to teach in which the conical plug is hollow.



Graffin discloses a magnetically actuated filler device for packages. Graffin teaches in which a conical plug (11) is hollow (Figure 1).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate a hollow plug within a magnetic valve. The motivation to combine relies on the need to actuate a plug that is light enough to be displaced by a limited amount of magnetic force.

In Reference to Claim 12

Knox teaches (Original) a valve mechanism as claimed in claim 11 (see the rejection of Claim 11 above), but fails to teach in which the member and the plug are magnetically attracted, such that the plug is retained by the member when in the second position.

Graffin discloses a magnetically actuated filler device for packages. Graffin teaches in which the member (24, 33) and the plug (11) are magnetically attracted (via 13) such that the plug is retained by the member when in the second position (Figure 1).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate a magnetic attraction between a plug and actuator member within a valve. The motivation to combine relies on the need to transfer a substance without the use of seals as to maintain a sterile process.

In Reference to Claim 21

Knox teaches (Currently amended) the valve being a magnetic valve (Figure 5) including a collar (33) surrounding and defining a port (37) and a plug (18) movable from a first position within the port (Figure 5), in which the port is wholly closed by the plug, to a second position out of the port (Figure 2), in which the port is not wholly closed, and in which the plug and collar are

magnetically attracted (col. 3, lines 59-65) such that in the first position the plug is magnetically retained within the pot (Figure 5), and wherein a first side of the plug has a convex shape (19).

Knox fails to specifically teach a method of handling a material using a container, the container having a valve, and the method comprising the steps of presenting the container oriented with the valve upwards to an actuator;

opening the valve with the actuator;

transferring the material into the container;

closing the valve;

inverting the orientation of the container to present the valve downwards to an actuator;

and opening the valve with an actuator.

Graffin discloses a magnetically actuated filler device for packages. Graffin teaches a method of handling a material using a container (col. 1, lines 17-23), the container having a valve (Figure 1), and the method comprising the steps of presenting the container oriented with the valve upwards to an actuator (Figure 1);

opening the valve (11) with the actuator (24, 35);

transferring the material into the container (col. 1, lines 17-23);

closing the valve (Figure 1);

inverting the orientation of the container to present the valve downwards to an actuator;

and opening the valve (11) with an actuator (24, 25).

It is inherently known that the prior art of Graffin would perform an expected function properly by reversing the orientation of the device. At the time of the invention, it would have been obvious by one of ordinary skill in the art to create a magnetic flow valve container with the steps of filling and emptying it with an actuator in different orientations. The motivation to combine relies on the need to fill or empty a container while maintaining a level of sterility.

9. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knox in view of US Patent No. 4,452,423 to Beblavi et al. (Beblavi).

Knox teaches (Original) a valve as claimed in claim 7 (see the rejection of Claim 7 above) but fails to teach in which the collar includes a plurality of permanent magnets disposed around the port.

Beblavi discloses a magnetically actuated valve. In Figure 3, Beblavi teaches a plurality of permanent magnets (36) disposed around the port.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate a plurality of magnets around the port of a valve. The motivation to combine relies on the need to make a central valve actuator or rotor magnetically operable.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. **Bunce et al (US 5,069,239)** discloses a plurality of magnets around a filler valve with a conically shaped actuator and plug.

- b. **Johnson, Jr. (US 4,785,842)** discloses a conical plug that is magnetically attracted to a valve actuator.
- c. **Jordan (US 2,743,078)** discloses a magnetically actuated fluid transfer valve with a conical plug and actuator.
- d. **Meyer (US 3,500,880)** discloses a magnetically filling valve with a conically shaped actuator and plug.
- e. **Reid (US 5,074,327)** discloses a valve with a magnetic plug that is magnetically attracted to an actuator.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Baskin whose telephone number is (571)270-7421. The examiner can normally be reached on Monday through Friday, 7:30AM to 5:00PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Bomberg can be reached on (571) 272-4922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 4137

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. B./

Examiner, Art Unit 4137

/Kenneth Bomberg/

Supervisory Patent Examiner, Art Unit 4137